

What is claimed is:

1. A disc recording apparatus for recording data on a disc using a recording address  $y$  calculated from  $y = n(x-m) + m$ ,

5 where  $x$  is an absolute time address generated on the basis of a pregroove formed on the disc,  $n$  is a scale factor of recording density, and  $m$  is a recording start address.

2. An apparatus according to claim 1, wherein information  
10 regarding storage capacity for data storage on said disc is received, and on the basis of the received information, said scale factor  $n$  of recording density is determined.

3. An apparatus according to claim 1 comprising means for  
15 comparing said received information regarding storage capacity and a predetermined maximum storage capacity.

4. An apparatus according to claim 2, wherein if the  
20 predetermined maximum storage capacity is exceeded in a comparison of the received information regarding storage capacity and the maximum storage capacity, data indicating that recording is impossible is sent.

5. An apparatus according to claim 1, comprising means for  
25 comparing said received information regarding storage capacity and two predetermined maximum storage capacities.

6. An apparatus according to claim 1, wherein said received information regarding storage capacity is sent from an external computer.

7. An apparatus according to claim 1, wherein said n is greater than 1 and less than or equal to 1.2.

8. An apparatus according to claim 7, wherein if scale factor n that is determined on the basis of received information exceeds 1.2, a response is sent indicating that recording at that scale factor n is impossible.

9. A disc recording apparatus for recording data to a disc with the recording address calculated as  $y = n(x-m) + m$  in the case where an offset address does not exist, where x is the absolute time address generated on the basis of the pregroove formed on the disc, n is the scale factor of recording density, and m is the recording start address, and the recording address z calculated as  $z = y + p$  in the case where recording is performed with said offset address, where p is the offset address.

10. An apparatus according to claim 9, wherein information regarding storage capacity of said disc for recording data is received, and said scale factor n of recording density is determined on the basis of the received information.

11. An apparatus according to claim 10 comprising means for comparing said received information regarding storage capacity and a predetermined maximum recording capacity.

5 12. An apparatus according to claim 11, wherein if the predetermined maximum storage capacity is exceeded in a comparison of the received information regarding storage capacity and the maximum storage capacity, data indicating that recording is impossible is sent.

10 13. An apparatus according to claim 9, comprising means for comparing said received information regarding storage capacity and two predetermined maximum storage capacities.

15 14. An apparatus according to claim 9, wherein said received information regarding storage capacity is sent from an external computer.

20 15. A disc recorded with data, wherein data is recorded with y as a recording address calculated from  $y = n(x-m) + m$ , where x is an absolute time address generated on the basis of a pregroove formed on the disc, n is a scale factor of recording density, and m is a recording start address.

25 16. A disc according to claim 15, wherein said n is greater than 1 and less than or equal to 1.2.